

# **State Trauma Advisory Board 2007 Annual Report**

**Arizona Department of Health Services  
Susan Gerard, Director**

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**Bureau of Emergency Medical Services and Trauma System  
150 North 18th Avenue  
Phoenix, Arizona 85007  
Bentley J. Bobrow, M.D., Medical Director  
Chairman, State Trauma Advisory Board  
Prepared by: Vicki A. Conditt, RN  
Assistant Bureau Chief - Development**

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# **State Trauma Advisory Board 2007 Annual Report**

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## CURRENT MEMBERS OF THE ARIZONA STATE TRAUMA ADVISORY BOARD

The following is a list of the talented professionals and citizens who serve the State of Arizona on trauma-related advisory board activities, giving of their time and expertise and providing invaluable guidance for the Arizona Trauma System. We thank them for their many contributions to the Arizona Department of Health Services, and their efforts on behalf of the citizens and visitors of Arizona.

### **Bentley J. Bobrow, M.D., Chairman and Medical Director, ADHS Bureau of EMS and Trauma System**

**Charles F. Allen, M.D., FACS**

Trauma Center Representative  
Center Medical Director  
Banner Good Samaritan Regional  
Medical Center  
Phoenix, AZ

**Philip Johnson, M.D.**

Rural Base Hospital not a  
Trauma Center - Representative  
Emergency Department Chair  
Navapache Regional Medical  
Center  
Show Low, AZ

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Region Representative  
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Regional EMS Council Northern Region  
Representative  
Coordinator, Trauma Service  
Flagstaff Medical Center  
Flagstaff, AZ

**Debbie Johnston**

Statewide Hospital Association  
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**Kelly Silberschlag, CEO**

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Prescott, AZ

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Statewide Fire District Association  
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**Scott Petersen, M.D.**

American College of Surgeons  
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Trauma Center Medical Director  
St. Joseph's Hospital and  
Medical Center  
Phoenix, AZ

**Ritch Steven**

National Association of Retired  
Persons - Representative  
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**Sgt. Martyn Fink**

Department of Public Safety  
Representative  
Phoenix, AZ

**Michael Pflieger, MD**

National Organization of  
Association Representative  
Emergency Physicians  
Scottsdale, AZ

**Mark Venuti, CEP**

Statewide Ambulance  
Association - Representative  
Director of Guardian Medical  
Transport  
Flagstaff, AZ

**Jim Flaherty, M.S., M.D., F.A.A.P.**

Federal Indian Health Services  
Organization Representative  
Tuba City Regional Health Care Corp.  
Tuba City, AZ

**Dave Ridings**

Fire Department in a County  
with a Population of Five  
Hundred Thousand Persons or  
More - Representative  
City of Tucson Fire Department  
Tucson, AZ

**Laurie Wood, R.N.**

Urban Advanced Life Support Base  
Hospital not a Trauma Center -  
Representative  
Prehospital Manager  
Banner Thunderbird Medical  
Center  
Glendale, AZ

**Stewart Hamilton, M.D.**

Regional EMS Council Western Region  
Representative  
Vice President of Medical Affairs  
Yuma Regional Medical Center  
Yuma, AZ

**Anslem Roanhorse**

Tribal Health Organization  
Representative  
Executive Director  
Trauma Program Director  
Navajo Division of Health  
Window Rock, AZ

**Michelle Ziemba, R.N.**

Regional EMS Council –  
Southeastern Region  
Representative  
University Medical Center  
Tucson, AZ

## **CURRENT MEMBERS OF THE ARIZONA TRAUMA SYSTEM QUALITY ASSURANCE AND SYSTEM IMPROVEMENT (AZTQ) COMMITTEE**

The following is a list of the talented professionals who serve the State of Arizona on trauma-related advisory board activities, giving of their time and expertise and providing invaluable guidance for the Arizona Trauma System. We thank them for their many contributions to the Arizona Department of Health Services, and their efforts on behalf of the citizens of Arizona.

### **Charles F. Allen, MD, Committee Chairman**

**Charles F. Allen, MD, FACS**

Trauma Center Representative  
Banner Good Samaritan Regional  
Medical Center  
Phoenix, AZ

**Pam Goslar, Ph.D.**

Trauma Administration  
St. Joseph's Hospital and  
Medical Center  
Phoenix, AZ

**Richard Porter, Epidemiologist**

ADHS  
Bureau of Public Health Statistics  
Phoenix, AZ

**Bill Ashland, RN**

Rural Representative  
Flagstaff Medical Center  
Trauma Coordinator  
Flagstaff, AZ

**Michelle Guadnola, RN**

Trauma Coordinator  
St. Joseph's Hospital  
and Medical Center  
Phoenix, AZ

**Kelly Silberschlag, CEO**

Mountain Valley Regional  
Rehabilitation Hospital  
Prescott, AZ

**Marcia Barry, RN (Vice Chair)**

Administrative Director  
Trauma Services  
Banner Good Samaritan Regional  
Medical Center  
Phoenix, AZ

**Philip L. Johnson, MD**

Emergency Department Chair  
Navapache Regional Medical  
Center  
Show Low, AZ 85901

**Charlann Staab, RN, MSN, CFRN**

Manager, Clinical Marketing and  
Outreach Education  
Air Evac Services, Inc.  
Phoenix, AZ

**Jane Burney, RN**

Trauma Quality Analyst  
Scottsdale Healthcare-Osborn  
Scottsdale, AZ

**Debbie Johnston**

Director, Regulatory Affairs  
AZ Hospital/Healthcare Assn.  
2901 N. Central Ave, Suite 900  
Phoenix, AZ

**Brenda Sutton, RN**

Phoenix Fire Department  
EMS Section  
Phoenix, AZ

**Jeff Farkas, NREMT-P**

Pinetop Fire Department  
Pinetop, AZ

**Marc Matthews, MD**

Arizona Burn Center  
Maricopa Medical Center  
Phoenix, AZ

**Linda Worthy**

Trauma Services Director  
John C. Lincoln - North Mtn.  
Phoenix, AZ

**Victor H. Garcia, RN, BSN, MBA**

Director of Emergency Medical  
Services  
Mercy Gilbert Medical Center  
Gilbert, AZ

**Scott Petersen MD**

Trauma Medical Director  
St. Joseph's Hospital and  
Medical Center  
Phoenix, AZ

**Michelle Ziemba, RN, MSN**

Trauma Coordinator  
University Medical Center  
Tucson, AZ

## INTRODUCTION

This report highlights the State Trauma Advisory Board's accomplishments, recommendations, and challenges over the last year.

The State Trauma Advisory Board (STAB), was established by the Arizona Legislature through passage of House Bill (HB) 2077, which added § 36-2222 to the Arizona Revised Statutes. HB 2077 was chaptered into Arizona Laws and signed by the Governor on April 21, 1994. STAB held its inaugural meeting on September 23, 1994, and has expertly served as an advisory body to the Director of the Arizona Department of Health Services (ADHS) ever since. STAB is comprised of health care professionals from hospitals and prehospital care agencies, and individuals representing the public who are appointed by the Director of ADHS. STAB's purpose, as mandated by statute, is to: (1) make recommendations on the initial and long-term processes for the verification and designation of trauma center levels, including the evaluation of trauma center criteria; (2) make recommendations on the development and implementation of comprehensive regional emergency medical services and trauma system plans; (3) make recommendations on the state emergency medical services and trauma system quality improvement processes, including the state trauma registry; and (4) submit a report to the director on or before October 1 of each year regarding the board's accomplishments and recommendations.

Intentional and unintentional injuries continue to be a significant public health concern in the United States. Traumatic injury refers to acute physical injuries, including burns and head injuries, which pose discernible risk for death or long-term disability. Trauma in the United States is estimated to be responsible for more than 161,000 deaths annually and for an estimated mortality rate of 55.9 per 100,000 persons. Children are said to account for 25 percent of all traumatic injuries. Injury has been the leading cause of death for children 1 to 14 years of age for decades. These figures are not decreasing; they are on the rise. Trauma is also the leading cause of death for Americans 35 years of age and younger. For all U.S. residents, unintentional injury ranked as the 5<sup>th</sup> most common cause of death. The number of intentional and unintentional injuries combined each year reflects the true ranking of injury as a leading cause of death in the United States. An organized trauma system as a component of an organized Emergency Medical System is indispensable in reducing the incidence of death and long-term disability from traumatic injury.<sup>1</sup>

Unintentional injury was the third leading cause of death in Arizona in 2006. A systematic and integrated approach to trauma care, including injury prevention, provides the best means to protect the public from premature death and prolonged disability resulting from traumatic injuries. An organized trauma care system reduces death and disability in two major ways: first, by identifying the causes of injury; and second, by promoting activities to prevent injury from occurring. Additionally, a state trauma system will assure that the necessary emergency medical services and facilities with the appropriate resources and capabilities are available to care for an injured patient. The system also assures that the necessary infrastructure is in place to deliver the "right" patient to the "right" facility in the "right" amount of time, and that the facility coordinates the resources necessary to return the patient to the highest level of function possible.

Arizona has made significant strides in developing a formal comprehensive trauma system since the ADHS's grant of authority to establish a formal EMS and trauma system in 2004. An organized EMS

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<sup>1</sup> U.S. Department of Health and Human Services, Health Resources and Services Administration document *Model Trauma System Planning and Evaluation*, released February 2006.

and trauma system requires coordination of many inter-dependent components including: 1) the designation of level I, II, III, and IV trauma centers pursuant to administrative rules that took effect on October 6, 2005; 2) the promulgation of state law providing for the American College of Surgeons (ACS) to verify a health care institution's ability to provide trauma services at a specified level; 3) the adoption of internal operating instructions to implement trauma center designation processes; and 4) hiring additional trauma program staff. These accomplishments to date advanced Arizona's trauma system toward an inclusive statewide model in which injured citizens and visitors are transported to the most appropriate, level-specific trauma facility. We strive to ensure that this specialized care is available to all citizens and visitors from the most densely populated areas of the state to the most remote locations. Thirty years of research consistently suggests that the death rates of severely injured patients are reduced by as much as 20 to 25 percent when treated at trauma centers within an organized statewide trauma system.<sup>1</sup>

Despite the accomplishments, funding constraints have limited STAB's attempts to have an inclusive statewide trauma system. There are currently seven level I trauma centers in Arizona. Although trauma center designation is available at levels II, III, and IV, no other health care institution, other than the level I trauma centers, has applied for designation. Only hospitals designated as level I trauma centers receive funding from the Trauma and Emergency Services Fund established pursuant to A.R.S. §36-2903.07. Ninety percent of this fund is distributed to level I trauma centers for unrecovered trauma readiness costs, and ten percent of the fund is distributed to hospitals for unrecovered costs attributable to providing emergency services. The fund is administered by the Arizona Health Care Cost Containment System (AHCCCS) as a result of a public initiative (Proposition 202).

### **Trauma Center Designation**

Trauma Center Designation was authorized under A.R.S. § 36-2225 and 9 A.A.C. 25, Article 13, effective October 2005. The rules in Article 13 provide standards and establish the process for the ADHS to designate and de-designate health care institutions as level I, II, III, or IV trauma centers. Designation as a level I trauma center requires that facilities make available the highest level of resources and capabilities, while designation as a level IV trauma center requires limited resources and capabilities. All seven designated Level I trauma centers over the next 15 months will undergo an on-site verification visit by the American College of Surgeons Committee on Trauma (ACS-COT) to verify each hospitals' resources and capabilities to be verified as an ACS level I trauma center or state designated as a level I trauma center. It is anticipated, due to a lack of on-call specialty coverage, that there is at least one hospital that will not meet either the ACS or the state criteria for level I and therefore will be ineligible to receive the AHCCCS funds.

Designation is a voluntary process, and no other health care institution has applied for trauma center designation as of the writing of this report. A number of hospital spokespersons have indicated that their hospital is unwilling to participate due to the lack of financial support for unrecovered readiness costs unless the hospital can meet the criteria for level I. However, if such funding were available many hospitals have expressed interest in participating at various designation levels. Attached is a list of the seven hospitals that are State designated as level I trauma centers.

### **Arizona State Trauma Registry**

The Arizona State Trauma Registry (ASTR) is a critical component in Arizona's formal trauma system, and is housed under the Office of Health Registries within the Bureau of Public Health Statistics. Having a robust and standardized database for statewide trauma services enables ADHS to evaluate the incidence, cause, severity, outcome, and overall system effectiveness of the Arizona

trauma system for trauma victims. An objective analysis of ASTR data will result in improved trauma care and enhanced injury prevention for citizens and visitors of Arizona.

ACS is strongly encouraging individual states to meet national trauma registry data elements and criteria standards pursuant to the National Trauma Data Bank (NTDB). ADHS has set the goal and is well underway to having the ASTR aligned with the NTDB.

In order to accomplish the task of aligning the ASTR with the NTDB, and because ADHS has never before included trauma registry requirements in rule, a rulemaking has been underway that creates standards for submission of trauma patient data to the ASTR. The rules include trauma patient inclusion criteria, minimum data element requirements, and deadlines for the submission of data. The rules also include requirements for ADHS reports on trauma registry data, provisions for trauma registry data quality assurance, and confidentiality requirements for trauma registry data and trauma system quality assurance. The rules were created by ADHS with input from the Trauma Data Rulemaking Work Group, a group of stakeholders convened by ADHS with the approval of STAB and its subcommittee - the Arizona Trauma System Quality Assurance and System Improvement Committee (AZTQ).

It is expected this rulemaking will take effect in January 2008. The trauma centers and hospitals submitting data to the trauma registry and participating in the Trauma Registry Users Group (TRUG) meetings have voluntarily agreed to begin collecting the additional data elements with their January 1, 2008 admissions. There are currently 11 hospitals reporting trauma patient data to the ASTR. Designated trauma centers are required to submit data to the ASTR, while other health care institutions may voluntarily submit trauma data. A list of the 11 hospitals currently reporting is attached.

The first comprehensive trauma data report was made public in September 2006. We continue to refine the quality of the data collected and improve the reports. Standard Public Reports for 2005 Trauma Data and 2006 Trauma Data are available online at [www.azdhs.gov/bems/trauma.htm](http://www.azdhs.gov/bems/trauma.htm). Analyses of the 2005 and 2006 trauma data are attached in the documents entitled 2005 Arizona Trauma Registry Patient Profile and 2006 Arizona Trauma Registry Patient Profile.

### **Arizona Trauma System Quality Assurance and System Improvement Committee**

AZTQ is comprised of individuals representing EMS and trauma services throughout the state. AZTQ is responsible for: 1) recommending standards for a uniform data collection system for the registry; 2) maintaining confidentiality of registry data; 3) the use of aggregate trauma data; 4) the release of trauma data; and 5) developing methods for continuous quality improvement of registry data and the statewide trauma system quality assurance process.

ADHS must ensure that trauma data are collected and submitted to the ADHS by participating health care institutions, and that the ADHS disseminates aggregate trauma data to the participating trauma centers and hospitals, general public, other health care providers, policy and program planners, and other interested entities pursuant to and in compliance with federal and state confidentiality laws.

Together, STAB and AZTQ have developed specific performance indicators used to evaluate trauma services on a statewide level. Reports are generated from the ASTR to provide data for review by the committees.

To facilitate widespread participation of many hospitals in trauma data collection, current plans call for future designated level IV trauma centers and non-designated facilities to provide a reduced set of data elements to decrease the burden of data collection on the smaller and more rural facilities.

### **American College of Surgeons Committee on Trauma (ACS-COT) - Trauma System Consultation**

The Bureau of EMS and Trauma System (BEMSTS) contracted with the American College of Surgeons Committee on Trauma (ACS-COT) to conduct a statewide trauma system consultation by a team of national trauma system experts in late June 2007. The purpose of the ACS-COT consultative visit was to obtain a comprehensive, on-site review and analysis of Arizona's trauma system, provide recommendations for system improvement and enhancement, and identify logical next steps in system development to improve Arizona's trauma system and thus enhance the delivery of trauma care in Arizona. To date, only 12 states have undergone this intensive specialty review process.

The consultative review required months of preparation including the completion of an intensive ACS Pre-Review Questionnaire by ADHS and stakeholders. Emergency medical services and trauma system-related statutes, rules, guidance documents, protocols, and other documents were provided to the review team. The three day on-site visit consisted of interactive dialogue between review team members and a broad range of trauma system participants. Opportunities were provided for informal discussion with the stakeholders and time devoted to questions and answers.

The ACS-COT Trauma System Consultation Review Team made the following key recommendations:

- Leadership: Increase the FTE allocation for the state EMS Medical Director and secure a position for a state Trauma Medical Director.
- Legislation: Amend state statutes to model an integrated systems approach to development and implementation of an inclusive trauma system.
- Finance: Develop and implement a standardized system of financial accountability for EMS Regions, Prehospital providers, and Trauma Centers.
- Ambulance and Non-Ambulance: Establish regulatory oversight of non-transporting units.
- Disaster Preparedness: Provide prehospital training utilizing an all-hazards approach such as provided by the AMA's Basic and Advanced Disaster Life Support Courses.
- Trauma Care Facilities: All hospitals should be designated as trauma centers or participating hospitals as part of a statewide inclusive trauma care system.
- Information Systems: The ASTR should expand its reach to include all hospitals, prehospital care, interfacility transfer and rehabilitation.
- Injury Prevention and Control: Establish methods to effectively evaluate injury prevention programs.
- Research: Develop a statewide trauma research consortium, linked to the activities and functions of the STAB and AZTQ, for purposes of promoting research throughout the continuum of trauma care.

These recommendations provide the BEMSTS and STAB, in collaboration with EMS Council and our stakeholders, specific goals and objectives to accomplish over the next few years. The final report from ACS-COT will be presented and reviewed at the September 2007 STAB meeting. At that meeting, STAB will establish priorities to improve Arizona's trauma system using the ACS-COT recommendations.



## **Challenges**

The participation of many talented and dedicated professionals and healthcare institutions in Arizona has resulted in a strong, primarily voluntary EMS and trauma system, concentrated in the urban core of the state. Additional commitments from facilities in Flagstaff, Yuma, and other urbanized areas have added vital capabilities to the system, although their continued participation is in jeopardy due to the high cost associated with trauma care. A truly inclusive statewide trauma system relies on the collection of vital data and the participation of all trauma centers, (levels I through IV), along with non-designated health care facilities, which all play an equally important role in the systematic trauma care of the trauma patient. Identifying solutions to ensure participation of all healthcare facilities is a top priority.

## **Conclusion**

The STAB and the BEMSTS continue to make progress in building the infrastructure for a comprehensive and inclusive statewide trauma system. Continued support and collaboration with ADHS and its committees, the legislature, and health care stakeholders are essential to achieving the overarching goal of preventing injury as well as reducing morbidity and mortality for all injured Arizonans.

## STATE DESIGNATED LEVEL I TRAUMA CENTERS

HEALTH CARE INSTITUTION	APPLICATION RECEIPT DATE	ACS VERIFIED?	EFFECTIVE DATE	EXPIRATION DATE
John C. Lincoln Hospital - North Mountain 250 East Dunlap Avenue Phoenix, AZ 85020	11-8-05	No	11-10-05	11-10-08
St. Joseph's Hospital & Medical Center 350 West Thomas Road Phoenix, AZ 85013	12-9-05	Yes	12-13-05	11-04-07
Scottsdale Healthcare – Osborn 7400 E. Osborn Scottsdale, AZ 85251	11-15-05	No	11-16-05	11-16-08
Maricopa Medical Center 2601 E. Roosevelt Phoenix, AZ 85008	12-13-05	No	12-28-05	12-28-08
Flagstaff Medical Center 1200 N. Beaver Street Flagstaff, AZ 86001	12-15-05	No	12-28-05	12-28-08
Banner Good Samaritan Medical Center 925 East McDowell Road Phoenix, AZ 85006	12-16-05	No	01-04-06	01-04-09
University Medical Center – Tucson 1501 N. Campbell Avenue Tucson, AZ 85724	12-19-05	No	12-28-05	12-28-08

<p align="center"><b>HOSPITALS CURRENTLY REPORTING TO THE ARIZONA STATE TRAUMA REGISTRY</b></p>
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<p>John C. Lincoln - North Mountain Phoenix, AZ 85020</p>
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<p>Banner Good Samaritan Medical Center Phoenix, AZ 85006</p>
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<p>St. Joseph's Hospital and Medical Center (ACS Verified) Phoenix, AZ 85013</p>
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<p>Scottsdale Healthcare (Osborn) Scottsdale, AZ 85251</p>
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<p>Flagstaff Medical Center Flagstaff, AZ 86001</p>
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<p>Maricopa Medical Center Phoenix, AZ 85008</p>
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<p>University Medical Center - Tucson Tucson, AZ 85724</p>
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<p>Yavapai Regional Medical Center Prescott, AZ</p>
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<p>Yuma Regional Medical Center Yuma, AZ</p>
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<p>Sierra Vista Regional Medical Center Sierra Vista, AZ</p>
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<p>Tuba City Regional Health Care Tuba City, AZ</p>
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